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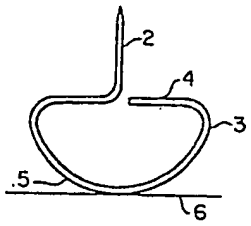
(54) Wire food support.

(57) A support of wire has a base portion (3) and a preferably integral prong portion (2).

The base portion (3) preferably provides a support portion (4) and a rounded bottom (5) for rounded point contact with a cooking utensil (6).

Several supports may be used together to support food, such as meat during roasting.

FIG. 1



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Wire Food Support

The invention relates to a food support to be used during cooking e.g. roasting of food such as meat, poultry, fish and the like.

When meat is to be cooked or roasted, it is often in contact with the bottom of a cooking vessel, usually resulting in adhering of the bottom portion of the meat to the roasting pan as it cooks. This results in a scorched pan and an under- or unevenly-cooked meat portion. The juices or gravy formed during the cooking

are generally wasted since it is singed with the bottom portion of the meat. The gravy that is formed is generally not available to the cook before the cooking is completed since to remove the gravy usually means removing the meat first. Constant removing of the meat results in lengthening of the cooking time and an interruption in the uniform cooking of the meat. The meat in the roasting process generally remains immersed in the meat juices or grease, and has a tendency to reabsorb the grease flowing around it. If the moisture content of the meat is low, the lower portion of the roast is, in effect, fried to a crust. If the moisture content of the meat is high, the lower part of the roast is stewed in the meat juices and grease, and much flavour is lost.

Contact of the meat with the bottom of the cooking pan in addition to retarding unifom cooking, causes a difficult cleaning problem. The portion of the pan that is in contact with the bottom of the roast usually requires scouring and substantial rubbing with cleaning pads or soap to remove the scorched crust formed thereby. As noted above, the gravy and grease usually burn away or are absorbed by the meat portion when the roast or poultry is in direct contact with the bottom of the cooking pan. Thus, prior cooking devices where the roast is in contact with the pan causes a constant rise in the rendered liquid constituents resulting from the cooking operation. This results in grease saturation of the lower portion of the roast, heat charring of the meat and pan, and consequent sticking of the roast to the receptacle where heat concentration is relatively great.

There are known apparatus for holding the meat above the bottom of the cooking vessel; however, many of these are integral with the pan itself and these raised portions are themselves scorched or encrusted by the grease formed. Also being fixed to the pan, these support portions cannot be used if meat is to be cooked in portions at variance with the size of the pan. Other devices used during roasting of meats are expensive to manufacture and awkard to use. Because of these drawbacks,few meat support devices have attained any marked commercial success.

A meat support device disclosed in copending application No. of even date (U.S. Serial No. based on U.S. application SN 297,701 filed August 31, 1981) comprises a device having the configuration of a segment of a cylinder. A triangular prong is integral with this segment and extends upwardly therefrom. This device is very beneficial in avoiding the problems encountered by the prior art supports. The present invention is an improvement on the support disclosed in this copending application.

It is an object of this invention to provide a food support and cooking device devoid of the above noted disadvantages.

Another object of this invention is to provide a cooking aid for holding food above the surface of a cooking pan and isolating the food from the grease and juices formed during cooking.

Another further object of this invention is to provide a movable food support device that is economical and easy to use.

A further object is to provide a food support which eliminates the charring and burning of the bottom of the pan during the cooking operation.

A still further object of this invention is to provide a safe, yet efficient device to use to assist in uniformly cooking on all sides meats, poultry, fish and the like.

Another object is to provide a cooking aid that can be removably secured to the bottom portion of a roast and support it at either a non-uniform or at a uniform distance from the bottom of the cooking vessel.

Still another object is to provide a meat support that promotes even cooking of the roast, and yet reduces cooking time of same.

According to one aspect of the invention, there is provided a support device for use in cooking characterized by: a wire base portion having at least one wire prong means extending upwardly therefrom, said wire base portion having lower means for contacting the surface of a cooking vessel and upper means for contacting and supporting a surface of food to be supported thereon, said prong means projecting upwardly from said base portion.

According to a further aspect of the invention, there is provided a support device for food to be cooked characterized by: a wire base support portion comprising a one piece wire portion bent to a shape having a pair of rounded end portions adapted to contact and rest in rounded point contact with the bottom surface of a cooking pan and having an integral intermediate portion

at a substantially higher elevation than said rounded end portions, said end portions and said intermediate portion forming an approximate semi-circle when viewed in side elevation, and upwardly directed prong means extending from said intermediate portion for piercing engagement with said food.

According to another aspect of the invention, there is provided a support device for a food portion to be cooked characterized by: a one piece wire structure, comprising at one end a prong extending vertically from the remainder of said support, and at the opposite wire end a terminal portion of said remainder, a wire portion between said ends defining a base support section having the configuration of a semi-circle when viewed in side or end elevation and comprising two rounded portions having a raised intermediate section therebetween, said intermediate section being at a substantially higher elevation than said rounded end portions and said prong projecting substantially rigidly upwardly from about the midpoint of said intermediate section.

For a better understanding of the invention and to show how the same may be carried into effect, reference will now be made, by way of example, to the accompanying drawings, in which:

Fig. 1 is a perspective view of one form of support device according to the present invention constructed from a single wire piece;

Fig. 2 is a perspective of another embodiment of this invention wherein wire pieces are connected to form prong and leg portions;

Fig. 3 is a perspective view of an embodiment similar to Fig. 1 with two prongs;

Fig. 4 is a perspective view of another embodiment bent from a single wire piece;

Fig. 5 is a perspective view of an embodiment similar to Fig. 4 with two prongs;

Fig. 6 is a perspective view of a one piece wire embodiment having an inverted semi-circular structure;

Fig. 7 is a perspective view of a support similar to Fig. 4 with a prong support cross bar; and

Figs. 8 and 9 are embodiments having substantially flat meat support portions and rounded support end portions.

In Fig. 1 a support device is illustrated having a substantially semi-circular configuration with a prong 2 extending upward from approximately the midpoint of the diameter of said structure. The device is useful for cooking food such as meat, poultry, fish, etc. A support wire base portion 3 comprises a substantially flat or even portion 4 for supporting the surface of the meat, fish or poultry. The rounded base portion 5 provides a means for contacting and resting in rounded point contact with a bottom 6 of a cooking pan. This rounded bottom 5 allows the support to be placed in the food in any position and still to provide appropriate support. It is not necessary that the support be inserted into the food in a perfectly perpendicular manner as with most prior art supports. In addition, this wire support will be somewhat resilient thereby providing a slight

spring locking effect when inserted into the food. Portion 4 will be spring pressed against the surface of the food and provide good support irrespective of the inserted position.

In Fig. 2 an embodiment is illustrated having four legs or prongs 7 connected together at point 8 by soldering or welding or any other suitable means. This embodiment comprises a wire base portion having three legs 7, and a prong 7. Of course, each wire extension can act as a leg or the prong. These legs 7 may act as the support legs or as the prong depending on the position desired. The legs 7 can be of the same or varied length so that any desired height can be achieved. This wire embodiment also provides a somewhat resilient support as do the other embodiments shown in the remaining Figures. Legs 7 can all be pointed, if desired.

In Fig. 3 is shown a structure similar to that of Fig. 1 but with two prongs 9 rather than one prong. The base portion 10 is also in the configuration of an approximate semi-circle, having two prongs 9 extending upwards from the diameter or flat portion 11. The rounded bottom 12 permits rounded point contact with the surface of the cooking vessel 13. As with the embodiment shown in Fig. 1, the embodiment shown in Fig. 3 provides a bonus effect of spring locking when the prongs 9 are inserted into the meat. An outward pressure is provided which holds the meat in any desired position. The support of Fig. 3 can be easily manufactured from a single piece of wire having at its one terminal portion the first prong 9 and at its opposite terminal portion the other prong 9.

Fig. 4 illustrates a support also constructed of one piece of wire having a prong 14 and wherein the wire is double looped as shown at 15 and 16. These loops form the rounded base or leg portions 17 and 18 that facilitate rounded point contact with the bottom of a cooking vessel 19. This wire support is similar in configuration to the meat support device described in copending application No of even date, except that the device in Fig. 4 is constructed of wire and the support of said copending application is constructed from a flat piece of metal, or molded from a flat piece of plastis material.

In Fig. 4, the support has no surface at voids or spaces 20 and 21. The support is a wire bent into shape and having one wire end at prong 14 and the other at wire end 22.

Fig. 5 shows a configuration similar to that of Fig. 4 except with double prongs 23 and 24. Rounded ends 25 and 26 allow point contact with the bottom of a cooking vessel similar to that shown in Fig. 4. As in Fig. 4, there are voids 27 and 28 between loops. The illustrated one piece wire constructions of the supports are easy to manufacture and economical. Because of their dimensions, they are convenient to ship and pack. The wire support of Fig. 5 has prong 23 as one of its end portions and prong 24 as the opposite end of the wire. Since ends 25 and 26 are rounded, the support may be inserted into meat in any position and need not be inserted in a perfectly perpendicular fashion. This, of course, is the case with all the illustrated wire embodiments except as shown in Fig. 2.

In Fig. 6, a one piece wire support is shown in which the base portion 29 is flat or level. This embodiment illustrates a support having a substantially semi-circular configuration wherein the diameter portion of the circle acts as the base 29. The configuration of any of the embodiments shown in all figures can be slightly flatter than a semi-circle or can deviate from a true semi-circle if for any reason this configuration is preferred. In Fig. 6, the rounded support portions 30 allow for a meat support section from which prong 31 projects. One end of this one piece wire support structure is prong 31 and the opposite end is shown at 32. Support base portions 33 preferably are rounded to provide a degree of rounded point contact with the surface of a cooking vessel. While the freedom to insert the support into meat in any direction is not as wide as when using supports of Fig. 1, 3, 4, 5, 7, 8 and 9, the support of Fig. 6 does provide adequate flexibility in this regard.

Fig. 7 depicts a support similar to that of Fig. 4 except in Fig. 7 a prong base support 35 is utilized. The wire is bent into a configuration having a double loop as shown at 36 and 37 with wire end portions 38 and 39 on substantially the same plane. Prong 34 and prong base 35 are integral with this one piece wire structure which extends in one piece up to wire end portion 40. The raised semicircular configuration of this support permits the meat to be maintained above the level of pan bottom 48.

In Fig. 8, a one piece wire support is shown having at one end a prong 41 and at the opposite wire end a terminal portion 42. This support has a flat base meat support 43 comprising parallel wire structures 44 and 45

and supporting cross piece 46. The flat base support 43 is held above the level of the bottom of a cooking pan 47. The end portions of the support are rounded as shown at 49 and 50. Cross piece 46 provides both lateral strength to the device and at the same time allows for improved meat support when in use. It will also fall to its side as will all of the other embodiments shown herein (except the device of Fig. 2), thereby preventing undesirable contact with the sharpened prong when not in use. Each end portion 49 and 50 is of a semi-circular configuration so that rounded point contact may be made with pan bottom 47 when in use. The length of parallel structures 44 and 45 may vary depending upon the desired pan size, etc.

Fig. 9 shows a device similar in configuration to the device of Fig. 8 except that the cross bar or section 46 of Fig. 8 is omitted. In Fig. 9, a partial cross section 51 is located at the base of prong 52 and extends parallel to pan bottom 53. The one piece unit extends from prong 52 to wire end 55. Rounded ends 56 and 57 permit easy positioning of the support when in use.

While double prongs can be used in any of the embodiments shown in all the figures, it is preferred that one prong be used for ease of manufacture and convenience of use. Also, the cross piece or base 35 shown in Fig. 7 can be used in any of the other embodiments if desirable, especially in Fig. 5. This cross piece 35 may strengthen the structure and provide in some cases a better support for the meat. In most cases, three or four support units will be used when cooking meats; however, any desirable number can be utilized. Also, if beneficial, different supports as shown in Figs. 1 - 9 can be used to provide varied

effects. The wire used for all of the supports disclosed herein must be flexible enough so that they can be bent and manufactured into the proper configuration and strong enough to support the weight of the meat, fish or poultry when in use. There are many wires on the market today that satisfy these requirements. All materials used must be non-toxic and have the proper heat stability. They can be coated or uncoated wires and can be made from any material that satisfies the physical properties discussed herein.

Thus, briefly summarized, the invention provides a support device to be used in cooking or roasting which comprises substantially wire supports and at least one upwardly projecting prong. The wire is bent into a form having a support portion and a prong portion. Although the wire can be of any suitable thickness, generally a thickness similar to that of a coat hanger is suitable. The wire material may be of any suitable material; typical materials are steel, aluminum, copper, other metals, inert plastics or synthetics, fiber-glass, and mixtures thereof.

The prong is preferably integral with the support portion and extends therefrom in the form of a sharp and elongate wire. The length of the prong is about equal to the length of each leg or supporting portion. This permits near maximum length for the prong and provides deeper and more secure penetration into meat or poultry. The support devices of this invention are adapted to be used in the bottom portion of a meat roast in any desired spaced arrangement. Usually three or four of these supports will be used to support all parts of the lower portion of the roast. This provides firm support for the meat above the bottom of the roasting pan and above the gravy or juice which normally collects there.

The support devices are easily and economically manufactured. A device can be formed from a piece of wire by bending the wire into the desired configuration. A prong is formed out of the center portion of the device and can be from the same or different piece of wire as the leg or support portion. In a preferred embodiment, the device has rounded end portions and a prong at approximately the center of the piece, the prong projecting upwardly from this mid portion. The rounded ends are adapted to rest in rounded point contact with the bottom of a cooking pan.

Alternatively, the support devices can be manufactured or molded from any suitable plastics or synthetic material having appropriate physical properties. Proper temperature and inert properties are necessary for use with food. Typical suitable plastics materials include high density polymere materials such as polyamides, polyvinyl chlorides, polyethylene, polycarbonates, polyurethanes, or any other suitable polymer or plastics.

The configuration of this plastics embodiment will resemble the metal wire embodiment in all respects except for the material from which it is made. Generally, the invention provides a support device suitable for a meat portion to be cooked, which comprises a wire base support section and prong means attached thereto, said base support section comprising a one piece wire portion bent into a support having a pair of rounded end portions adapted to contact and rest in rounded point contact with the bottom surface of a cooking pan, and having an integral intermediate portion at a substantially higher elevation than said rounded end portions, said end portions and said intermediate

portion forming substantially a semi-circle when viewed in side elevation, and an upwardly directed prong extending from said intermediate portion for piercing engagement with said meat.

In another embodiment, support devices made from a metal or plastics wire have a plurality of prongs which can act as either the support legs or the prong. Each of the prongs can be of the same or varied length. This embodiment is shown in Fig. 2.

The preferred support device, therefore, is constructed of a thick wire similar in thickness to a wire coat hanger. The wire is bent into any suitable form, for example, one having a semi-circular configuration with an upwardly projecting prong. This device is easy to manufacture and convenient to pack and ship in several units. The wire may have a one component or a wire coated structure and be of any suitable material; typical materials for the wire itself or the coating are steel, aluminum, other metals, inert and non-toxic plastics or synthetics, fiber glass and mixtures thereof.

Individual support devices are adapted to be applied to the bottom of a cut of meat or a poultry item in any desired spacing or arrangement. Usually three or four such support devices will be used in combination to suuport all parts of the food, e.g. a roast, firmly in an elevated position above the bottom of the roasting pan and above the gravy or juice which normally collects there.

The support devices of the present invention comprise very simple metal wires, coated or non-coated, which can be easily cleaned and may be stored in a small space

when not in use. Each support comprises a wire bent into a shape having a support or base portion and a prong. The support portion is adapted to rest at its opposite ends on the bottom of the roasting pan and has a tong or prong struck upwardly approximately midpoint therefrom.

It is important in the preferred embodiments shown in Figs. 1, 3, 4, 5, 7, 8 and 9 that the support end portions are rounded for proper stability when they are inserted into the meat or poultry. Generally, three or four support devices are used at one time, and the configuration of the rounded ends provides a means of maintaining the desired distance from the bottom of the cooking vessel. If the ends were squared or not rounded, the meat would not be properly supported especially in those cases where the bottom meat surface was irregular. With use of the illustrated support devices, the pan bottom can contact any point on the circumference of the support ends, and still all of the supports used will maintain pan contact.

The preferred and optimumly preferred embodiments of the present invention have been described herein and shown in the accompanying drawings to illustrate the underlying principles of the invention, but it is to be understood that numerous modifications may be made without departing from the scope of this invention.

Claims:

1. A support device for use in cooking characterized by: a wire base portion (3; 7; 10; 29) having at least one wire prong means (2; 7; 9; 14; 23; 24; 31; 34; 41; 52) extending upwardly therefrom, said wire base portion having lower means (5; 7; 12; 17, 18; 25, 26; 33; 38, 39; 49, 50; 56, 57) for contacting the surface of a cooking vessel and upper means (4; 8; 11; 30; 43; 45) for contacting and supporting a surface of food to be supported thereon, said prong means projecting upwardly from said base portion.

2. A device according to claim 1 characterized in that said prong projects in a direction substantially perpendicular to a horizontal plane containing points on an upper portion of said wire base portion.

3. A device according to claim 1 or 2 characterized in that said prong means comprises a single prong.

4. A device according to claim 1 or 2 characterized in that said prong means comprises more than one prong.

5. A device according to any one of claims 1 to 4 characterized by being constructed primarily from one piece of wire and by said prong means being integral therewith and a terminal portion thereof.

6. A device according to claim 1 characterized in that said wire base portion comprises a tripod configuration (7) having a prong means extending vertically therefrom.

7. A device according to any one of the preceding claims characterized by being constructed from a piece of wire having a separate prong fixedly attached thereto.

8. A support device for food to be cooked characterized by: a wire base support portion (3; 10; 29) comprising a one piece wire portion bent to a shape having a pair of rounded end portions (17, 18; 25, 26; 33; 38, 39) adapted to contact and rest in rounded point contact with the bottom surface (6; 13; 19; 48) of a cooking pan and having an integral intermediate portion (4; 11; 30; 36, 37) at a substantially higher elevation than said rounded end portions, said end portions and said intermediate portion forming an approximate semi-circle when viewed in side elevation, and upwardly directed prong means (2; 9; 14; 24; 31; 34) extending from said intermediate portion for piercing engagement with said food.

9. A device according to claim 8 characterized in that a one piece wire construction is used in which one end of said wire is said prong means and the other end of said wire terminates at a point immediately adjacent the base of said prong means.

10. A device according to claim 8 or 9 characterized in that the curved portion of said semi-circle is arranged for contact with said surface of said cooking pan.

11. A device according to claim 8 or 9 characterized in that the substantially flat diameter portion of said semi-circle is arranged for contact with said surface of said cooking pan.

12. A device according to any one of claims 8 to 11 characterized in that the wire base portion is in the form of a double looped base having a raised portion defining a raised semi-circle when viewed in side elevation, said prong means extending vertically from about the apex of said raised semi-circle.

13. A device according to any one of claims 8 to 12 characterized by one prong.

14. A device according to any one of claims 8 to 12 characterized by more than one prong.

15. A device according to any one of claims 8 to 14 characterized by a base support for said prong means.

16. A support device for a food portion to be cooked characterized by: a one piece wire structure comprising at one end a prong (2; 9; 14; 23; 24; 31; 34; 41; 52) extending vertically from the remainder of said support, and at the opposite wire end (4; 22; 32; 40; 42; 55) a terminal portion of said remainder, a wire portion between said ends defining a base support section having the configuration of a semi-circle when viewed in side or end elevation and comprising two rounded portions (17, 18; 25, 26; 33; 38, 39; 49, 50; 56, 57) having a raised intermediate section therebetween, said intermediate section being at a substantially higher elevation than said rounded end portions and said prong projecting substantially rigidly upwardly from about the midpoint of said intermediate section.

17. A device according to claim 16 characterized in that said semi-circle configuration is so formed that the diameter portion is said intermediate section.

18. A device according to claim 16 characterized in that said semi-circle configuration is so formed that the semi circumference is the intermediate portion.

19. A device according to any one of claims 16 to 18 characterized by a configuration in which the base support section comprises two rounded end portions having a semicircular configuration when viewed in end perspective, and having therebetween two parallel wire portions (42, 44) upon which the food portion will rest when in use.

20. A device according to claim 19 characterized in that a cross wire section connects said parallel wire portions at approximately their midpoints.

21. A device according to claim 19 characterized in that a cross wire section integral with said prong partially bisects the space between said two parallel wire portions.

FIG. 1

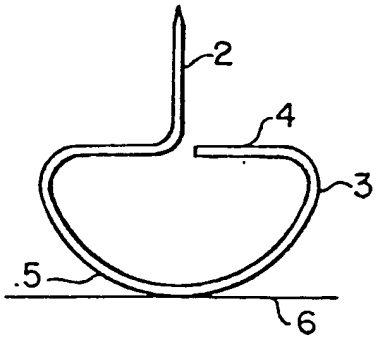


FIG. 5

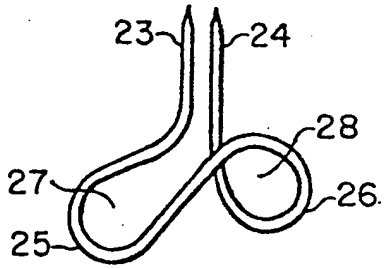


FIG. 2

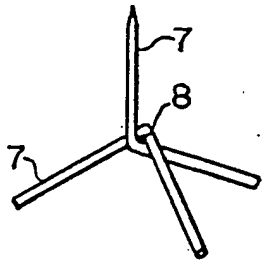


FIG. 6

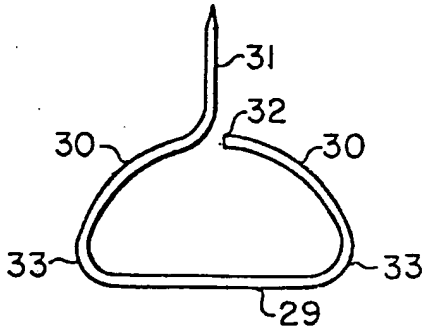


FIG. 3

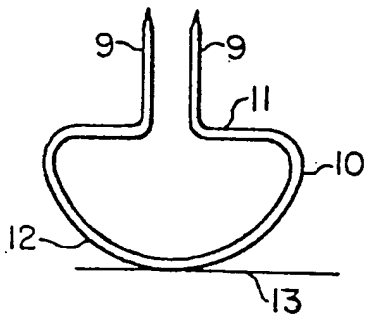


FIG. 7

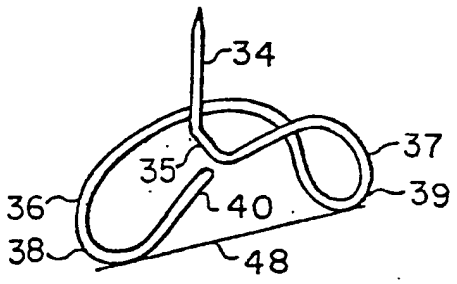


FIG. 8

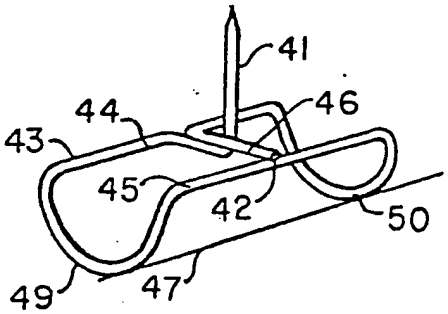


FIG. 4

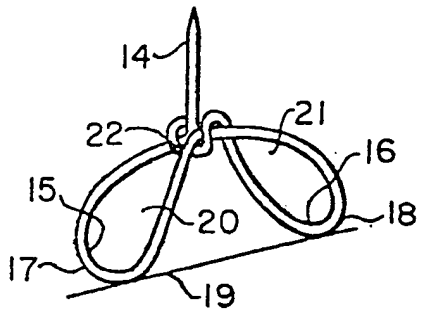
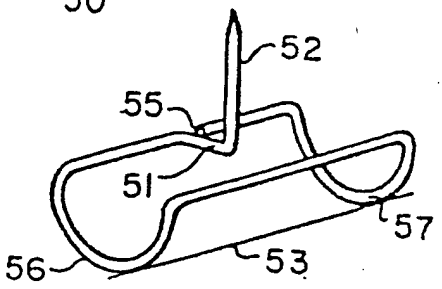


FIG. 9



European Patent Office

0124637
Application number

EUROPEAN SEARCH REPORT

EP 83 10 7278

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl. ³)
X	GB-A- 592 641 (CROMPTON) * Whole document *	1-5	A 47 J 43/18 A 47 J 37/10
D,A	US-A-4 420 493 (GRECK)		

TECHNICAL FIELDS SEARCHED (Int. Cl. ³)

A 47 J

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
THE HAGUE	06-08-1984	SCHARTZ J.

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
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